EA Form R 1/2001

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT

For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

Applicant/Contact name and address: **FRA PORTER**
HC40, BOX 103
DECKER, MT 59025

1. *Type of action*: **APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 42B 30042682**

2. *Water source name*: **COAL BED METHANE PIPELINE**

3. *Location affected by project*: **SECTION 29 IN T9S, R42E AND SECTION 28 IN T9S, R42E. BOTH LOCATIONS ARE IN BIG HORN COUNTY.**

4. *Narrative summary of the proposed project, purpose, action to be taken, and benefits*:
This project is for Coal Bed Methane (CBM) water from a pipeline owned by Pinnacle Gas Resources (PGR) in order to obtain water for the irrigation of 246 acres in Big Horn County. The application requests a total volume of 328.5 acre-feet (AF) to be applied from May 1st to October 31st inclusive each year. Water for the CBM pipeline is supplied through the acquisition of natural gas from 103 wells currently, at a production rate of 2.5 acre-feet per day (AF/D). This application requests the use of three water taps from this pipeline to operate a pivot sprinkler system and sub surface irrigation on 246 acres owned by the applicant. The requested water will be used to irrigate grass and alfalfa pasture for hay and cattle grazing purposes. Additionally, a portion of the water will be held in two preexisting reservoirs for use during dryer periods of the season.

The DNRC will issue a provisional water use permit if all criteria for issuance under §§ 85-2-311, MCA are met.

5. Agencies consulted during preparation of the Environmental Assessment: (include agencies with overlapping jurisdiction)
Montana Natural Heritage Program
Montana Historic Preservation Office
Montana Department of Fish Wildlife & Parks (MFWP)
Montana Department of Environmental Quality (MDEQ)

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity **-** *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: **No significant impact.**
This source of water if from the Coal bed methane (CBM) production pipeline, and has undergone analysis for the Montana Board of Oil and Gas (MBOGC) and is considered developed water.

Water quality **-** *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: **No significant impact.**
This area is not on the Montana Department of Environmental Quality's list of water quality impaired or threatened streams. This proposed irrigation use is expected to have no significant impact on water quality in the area.

Groundwater **-** *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: **No significant impact.**
This application is requesting the use of CBM water; therefore, no significant impacts to groundwater quality or quantity are expected.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: **No significant impact.**
There are two diversion systems for this proposed project: The first diversion system in this application consists of a set of 10-inch PIP and 8-inch IPS pipelines connected to the diversion point (tap) on the CBM pipeline. These pipelines divert water into the pivot sprinkler system. A control valve near the CBM pipeline connection will be used to control volume into the diversion pipeline.

The second diversion system also consists of a set of 10-inch PIP and 8-inch IPS pipelines that will deliver water to a lined surge pond of approximately 25 AF in capacity with an annual evaporation of 9.9 AF/YR. A 24-inch in diameter SDR-11 suction line will feed a wet well located in a pump building for means of treating the water before application in the sub-drip irrigation system. An approximated volume of 0.46 CFS will feed the 110 acre sub-drip irrigation area each day and will be controlled through a valve system near the diversion point. The sub-drip irrigation area consists of eleven 10 acre blocks each equipped with an electronic flow valve to regulate water volume applied by the underground emitters.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species **-** *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: **No significant impact.**
The Montana Natural Heritage Program has identified three species of concern within this proposed project area:

Greater Sage-grouse	**(*Centrocercus urophasianus*)**
Lark Bunting	**(*Calamospiza melanocorys*)**
Bald Eagle	**(*Haliaeetus leucocephalus*)**
Spiny Softshell	**(*Apalone spinifera*)**
Loggerhead Shrike	**(*Lanius ludovivianus*)**
Brewer's Sparrow	**(*Spizella breweri*)**
Greater Short-horned Lizard	**(*Phrynosoma hernandesi*)**
Burrowing Owl	**(*Athene cunicularia*)**
Sage Thrasher	**(*Oreoscoptes montanus*)**
Sauger	**(*Sander Canadensis*)**
Western Hog-nosed Snake	**(*Heterodon nasicus*)**
Common Sagebrush Lizard	**(*Sceloporus graciosus*)**
Milksnake	**(*Lampropeltis triangulum*)**
Snapping Turtle	**(*Chelydra serpentine*)**

It is not known or expected that this proposed project will adversely impact any of these species.

Wetlands **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: **No significant impact.**
No wetlands are claimed within the project area.

Ponds **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: **No significant impact.**
This project will increase the available water to wildlife and any waterfowl in the area and should have no effects on fish due to the nature of the source.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: **Unknown.**
This project may degrade soil quality within the area. However, the applicant has identified quantities of additives which will be applied in the area of water use to mitigate the additional salinity from the CBM water. These additives are 2 to 6 tons of gypsum and ½ to 1 ton of sulfur per acre. This proposed irrigation use is expected to have no significant impact on soil quality in the area.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: **No significant impact.**
There will be some soil disturbance during construction of this proposed project and there is a possibility for spread or establishment of noxious weeds. The landowner is responsible for controlling any establishment of noxious weeds as a result of disturbance.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: **No significant impact.**
No deterioration of air quality or adverse effects on vegetation due to increased air pollutants from this project is expected.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: **No significant impact.**
The State of Montana Historic Preservation Office (SHPO) has identified twenty (20) historic and archeological sites of record in the proposed project area and nearby local. SHPO recommends that all new construction and disturbances be carefully monitored and should any historic or cultural resources be inadvertently uncovered it is asked that the SHPO office be contacted and the site investigated.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: **No significant impact.**
There should be no significant impacts on other environmental resources of land, energy, and water from this proposed use.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: **No significant impact.**
This proposed use is not inconsistent with any locally adopted environmental plans and goals for Big Horn County.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: **No significant impact.**
There should be no significant impacts on recreational or wilderness activities from this proposed use.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: **No significant impact.**
There should be no significant impact on human health from this proposed use.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No _**X**_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: **No significant impact**.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* **No significant impact.**

(b) *Local and state tax base and tax revenues?* **No significant impact.**

(c) *Existing land uses?* **No significant impact.**

(d) *Quantity and distribution of employment?* **No significant impact.**

(e) *Distribution and density of population and housing?* **No significant impact.**

(f) *Demands for government services?* **No significant impact.**

(g) *Industrial and commercial activity?* **No significant impact.**

(h) *Utilities?* **No significant impact.**

(i) *Transportation?* **No significant impact.**

(j) *Safety?* **No significant impact.**

(k) *Other appropriate social and economic circumstances?* **No significant impact.**

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts: **No significant impact.**

Cumulative Impacts: **No significant impact.**

3. *Describe any mitigation/stipulation measures:* **Each applicant who applies for a beneficial use permit for CBM water from the PGR pipeline is required to sign an agreement addendum that allows PGR to ensure all appropriators on their pipeline can be accommodated. It is noteworthy that a study, within, and encompassing a three mile radius of, the CBM field is ongoing to assess any potential affects to surface water and ground water in the Powder River Basin.**

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:* **The applicant could drill wells to supply the amount of water needed for the proposed uses. However, this would be very costly and it is questionable whether the water would be available in the amount requested. Also, without private landowners using this water in a beneficial way Pinnacle Gas Resources would have to find an alternative beneficial means of CBM effluent disposal. Although, drilling wells would yield a better quality of water for surface application.**

The "no action" alternative would mean Fra Porter could not have irrigation water for some of their property and therefore not be able to raise and feed all of their cattle. Additionally, Pinnacle Gas Resources would have to find a different beneficial means of CBM effluent disposal.

PART III. Conclusion

1. *Preferred Alternative:* **The preferred alternative would be to allow use of water, from the CBM pipeline with the condition that there will be no adverse impacts to any senior water rights or soils within the area.**

2. *Comments and Responses:* **None to report.**

3. *Finding:*
*Yes___ No_**X**_ Based on the significance criteria evaluated in this EA, is an EIS required?* **No EIS is required.**

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action: **No significant environmental impacts were identified, therefore no EIS is recommended.**

Name of person(s) responsible for preparation of EA:

Name: **Mark V Corrao**
Title: **Water Resources Specialist**
Date: **October 21, 2008**